# Corrections to lecture notes

Typos in the (printed version of the) lectures notes; fixed in the latest online version.

## Chapter 1

- At the bottom of page 8, the $T$ should be a 1.

- Equation (2.1) should read $\mathbb{E}[S_1] = sup_u + sdp_d$, but the $s$ is missing.

- In exercise 1.5, it should read

$$\mathbb{P}[X = x] = \begin{cases} \frac{1}{n} & \text{if } x = n^2 \\ 1 - \frac{1}{n} & \text{if } x = 0. \end{cases}$$

  but the $\cdot^2$ is missing.

## Chapter 2

- The final displayed equation at the bottom of page 16 should read

$$X^{-1}[0,1] = \{HH, HT, TH\} \notin \ldots$$

- $Y = \mathbb{1}_A$ in the proof of Lemma 2.4.4.

## Chapter 3

- Fixed $\mathcal{F}_1$ and $\mathbb{P}[X_i = 0]$ in the example of conditional expectation on page 29.

- The $\mathbb{E}[X \,|\, \mathcal{G}]$ in the proof of the (measurability): part of Proposition 3.2.1 should be an $X$.

- Added missing $X \in L^1$ condition to Lemma 3.2.4.

## Chapter 4

## Chapter 5

- Fixed second part of Proposition 5.2.6 to read 'time 1' instead of 'time 0'.

- Four lines up from Definition 5.5.4, 'measurable' should read 'adapted'.

- Fixed the proof of Proposition 5.5.7.

- Within the binomial model hedging method:

STEP 3: Fixed $\Phi(su) = 180$ to $\Phi(su) = 190$ on the first displayed equation.

STEP 4: Fixed $\Phi(su) = 120, \Phi(sd) = 40$ just above the first displayed equation to read $\Phi(su) = 52.5, \Phi(sd) = 2.5$, and also in the calculation of $x_1, y_1$. Fixed $y_t$ to read $y_1$.

## Solutions

Q1.1 Replaced the solution (it answered the wrong question).

Q1.2 Various typos.

Q1.4 It should say that $\mathbb{E}[X^2] = \frac{2}{\lambda^2}$ and $\text{Var}(X) = \frac{1}{\lambda^2}$.

Q1.6 Fixed the $\sigma^2$s.